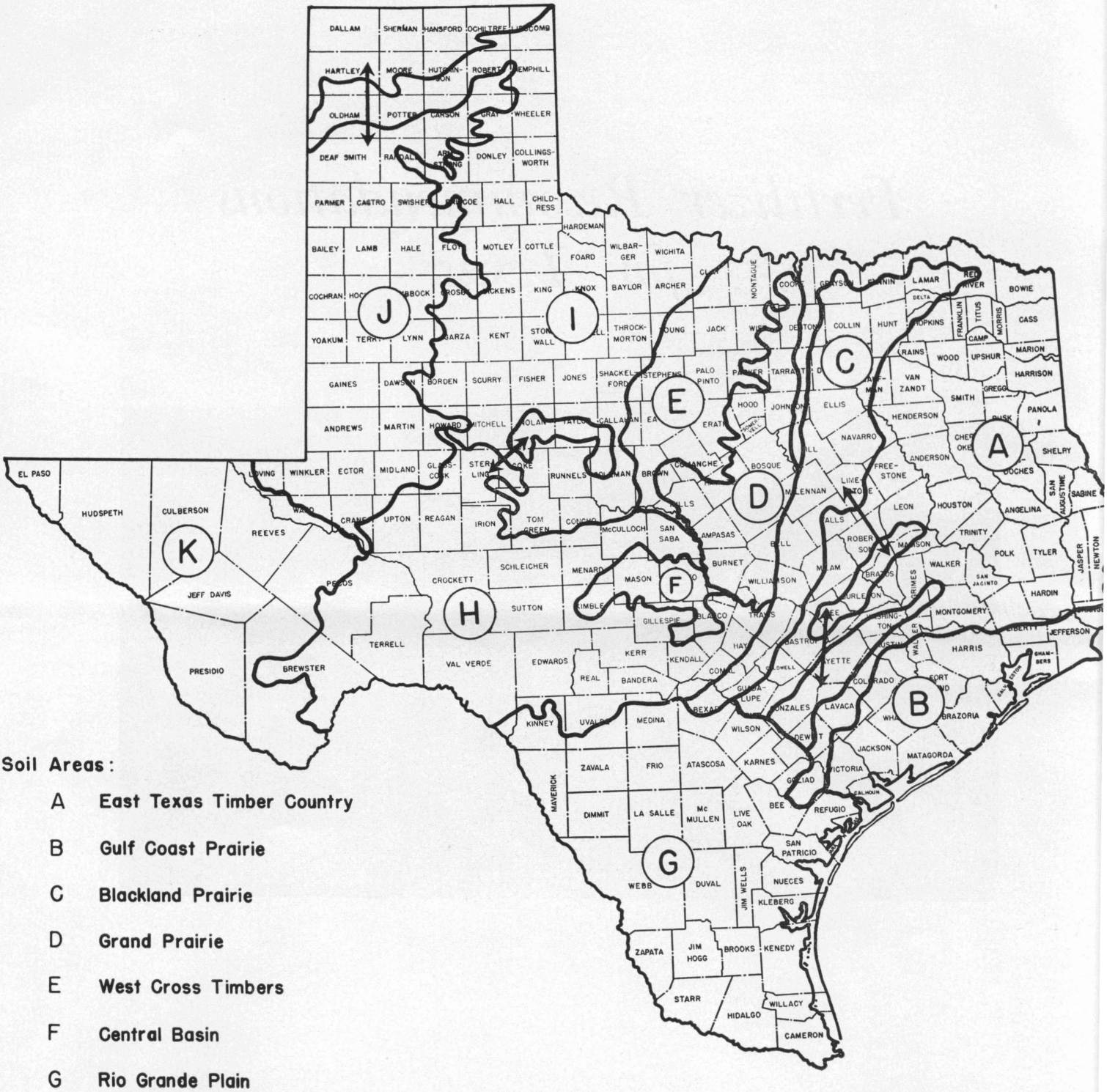
B-165, Rev. 1950

Fertilizer Recommendations for Texas

Issued by
The Agricultural Extension Service
The Texas A. & M. College System and
The United States Department of Agriculture
G. G. Gibson, Director, College Station, Texas

THE SOILS OF TEXAS



Soil Areas:

- A East Texas Timber Country
- B Gulf Coast Prairie
- C Blackland Prairie
- D Grand Prairie
- E West Cross Timbers
- F Central Basin
- G Rio Grande Plain
- H Edwards Plateau
- I Rolling Plains
- J High Plains
- K Mountains and Basins

Adapted from Texas Agricultural Experiment Station Bulletin 431, by W.T. Carter.

Fertilizer Recommendations for Texas

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The use of commercial fertilizers has increased greatly during the past few years. This bulletin offers suggestions to aid the user of fertilizer in selecting those grades best adapted to the different areas in the state.

For best results with fertilizers, other factors should be favorable; for example, well prepared seed bed, good stand, absence of disease, adequate moisture, and good cultivation. **Good cropping systems with legumes in the rotation generally aid in a favorable response of crops to fertilizers.** It is usually cheaper to use high analysis fertilizers. Low analysis fertilizers cost less per bag, but the cost per acre is greater for the same amount of nutrients. The grades 5-10-5 and 10-20-10 both have the same ratio (1-2-1) of nutrients, but 10-20-10 has twice as much fertilizing value as 5-10-5. It would require only one-half as much per acre to be as efficient as 5-10-5.

Fertilizer is usually applied at the time of planting or just before planting. Mixed fertilizer should not touch the seed. It is best placed in a band two or three inches on one or both sides of the seed and two or three inches below the seed with a fertilizer distributor on the planter. Fertilizers should be put in the ground and not spread on the ground for best results.

Where a large quantity of fertilizer is to be used per acre, part of it may be applied at planting time and the remainder later on after the plants are up and growing.

Side dressing of growing crops with nitrogen is expressed in terms of pounds of actual nitrogen to be applied per acre. These may be converted into pounds of fertilizer by considering the percentage of nitrogen in the fertilizer as shown on the tag. For example the recommendations suggest 30 pounds of nitrogen per acre for side dressing corn. This may be obtained from approximately 100 pounds of ammonium nitrate (33½% N.) or 150 pounds of ammonium sulfate (20% N.) or approximately 200 pounds of sodium nitrate (16% N.). To get 60 pounds of nitrogen, one would use twice the above, and for 20 pounds of nitrogen one would use 2/3 of the quantity needed for 30 pounds.

The river bottom soils of the Trinity, Brazos, Colorado, and others in the central and central western parts of the state may be fertilized according to the recommendations for the Blackland Prairies.

Liquid fertilizers may be used instead of solid fertilizers. The results obtained from the use of liquid fertilizers are in line with those obtained from solid fertilizers. Liquid fertilizers are usually more expensive.

Fertilizers for fruit trees should be applied over the area covered roughly by the spread of the limbs, and worked into the soil by cultivation.

In cases where 20% superphosphate has been recommended, concentrated superphosphate may be used at a proportionally lower rate. For example, 100 pounds of 40% superphosphate will replace 200 pounds of 20% superphosphate.

The quantities suggested in these recommendations are those found best by experiment and by practical experience in the field. Variations from these recommended formulas may be used after experience has been gained in the use of them and the individual has learned for himself what variations are best suited to his conditions and needs.

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Field Crops	Fertilizer	Pounds Per Acre
Alfalfa (River Bottom)	20% superphosphate	400
On sandy and sandy loam soils	4-12-8, 3-12-12	500
On acid soils	One to two tons lime additional	
Corn) Grain Sorghum) Sweet Sorghum) Sudan)	5-10-5, 4-12-8, 8-8-8 Also side dress with 60 lbs. nitrogen Following fertilized legumes—None	300-400
Cotton	5-10-5, 5-10-10, 8-8-8 Following fertilized legumes—None	300-400
Legumes, summer	5-10-5, 4-12-4, 5-10-10, 4-12-8	300-400
Legumes, winter	0-14-7, 0-12-12, 3-12-12 or 20% superphosphate	300-400 200-400
Oats and other small grains	5-10-5, 4-12-4	300
For grain	Also top dress in early spring with 30 lbs. nitrogen Following fertilized legumes—None	
Pastures, (permanent)	5-10-5, 4-12-4	400-500
Grasses only	Also top dress with 30 lbs. nitrogen per application as needed	
Grasses and legumes	4-12-8, 3-12-12	400-500
On deep sandy soils	4-12-8, 3-12-12, 0-14-7	400-500
Pastures, (temporary)	5-10-5, 4-12-4	300
Small grains	Also top dress in fall and in early spring with 30 lbs. nitrogen per application Following fertilized legumes—None	
Small grains and legumes	0-14-7, 0-12-12, 4-12-8, 3-12-12	300-400
On acid soils	Top dress in early fall with 30 lbs. nitrogen One to two tons of lime additional	
Peanuts	4-12-4	200-400
Sugar Cane	5-10-5, 6-10-4, 8-8-8 Also side dress with 30 lbs. nitrogen	400-500

Fruits and Truck Crops	Fertilizer	Pounds Per Acre
Lettuce) Cabbage) Mustard) Collards)	5-10-5, 5-10-10, 8-8-8 Also side dress with 30 lbs. nitrogen	400-600
Carrots) Beets) Turnips)	4-12-4, 5-10-10, 4-12-8	400-600
Sweet Potatoes	5-10-10, 4-8-12	600-1000
Irish Potatoes	5-10-10, 4-12-8, 5-10-5 Also top dress with 45 lbs. nitrogen	400-600

Fruits and Truck Crops	Fertilizer	Pounds Per Acre
Tomatoes) Peppers) Eggplants)	5-10-5, 5-10-10 or 5-10-5 at planting time in rows And side dress at first bloom with 400 lbs. of 8-8-8 or 5-10-5 at planting time in rows Followed by 300 lbs. 8-8-8 at first bloom and 200 lbs. 8-8-8 three weeks later	600-800 600 400
Cantaloupes) Squash) Cucumbers) Watermelons)	5-10-5, 4-12-4 Also side dress with 30 lbs. nitrogen	400-500
Beans) Peas, English) Peas, Blackeyed, Purplehull) Etc.)	4-12-4. 5-10-5	300-500
Blackberries) Dewberries)	5-10-5	600-800
Strawberries	5-10-5 at planting time Also at first bloom Also in late spring after bearing season	400 300 300
		Pounds Per Tree
Apples) Peaches) Plums)	5-10-5, 4-12-4 Side dress with ½ lb. nitrogen in April or May	5-8
Pecans (sandy upland)	8-8-8 Also side dress with 2 lbs. nitrogen per tree in May	20-30

GULF COAST PRAIRIE

Field Crops	Fertilizer	Pounds Per Acre
Alfalfa—On heavy alluvial soils	20% superphosphate	400
On sandy alluvial soils On acid soils	0-14-7, 0-12-12 One ton lime additional	500
Corn) Grain Sorghum)—Blackland Sweet Sorghum) Sudan)	10-10-0, 7-14-0 or 16-20-0 Also side dress with 40 lbs. nitrogen Following fertilized legumes—None	300-400 200
On sandy or sandy loam soils	5-10-5, 4-12-4 Also side dress with 60 lbs. nitrogen Following fertilized legumes—None	300-400
Cotton—Blackland	7-14-0, 10-10-0 or 16-20-0 Following fertilized legumes—None	300-400 200
On sandy or sandy loam soils	5-10-5, 6-10-4 Following fertilized legumes—None	400-500
Flax—Blackland	7-14-0, 10-10-0 or 16-20-0, 12-15-0	200-300 100-150
On sandy or sandy loam soils	5-10-5	300-400

Field Crops	Fertilizer	Pounds Per Acre
Legumes, summer and winter		
Blackland	20% superphosphate	200
On sandy or sandy loam soils	0-14-7, 4-12-8	300
Pastures, (permanent)		
Blackland	7-14-0, 10-10-0 or	400
Grasses only	16-20-0, 12-15-0	200
	Also 30 lbs. nitrogen per application as needed	
Grasses and legumes	20% superphosphate	400
On acid soils	One ton of lime additional	
On sandy or sandy loam soils	5-10-5, 4-12-0	400-500
Grasses only	Also 30 lbs. nitrogen per application as needed	
Grasses and legumes	0-14-7, 4-12-8, 3-12-12	500
On acid soils	One ton of lime additional	
Pastures, (temporary)		
Blackland	7-14-0, 10-10-0 or	200-300
Small grains only	16-20-0, 12-15-0	100
Small grains and legumes	20% superphosphate	300-400
On acid soils	One ton of lime additional	
On sandy or sandy loam soils	5-10-5, 4-12-8	200-300
Small grains only	Also 30 lbs. nitrogen per application in fall and spring	
Small grains and legumes	0-14-7, 4-12-8, 3-12-12	300-400
On acid soils	One ton of lime additional	
Peanuts	4-12-4	200-300
Rice		
Heavy black clay soils	10-10-0 or	400
	16-20-0	200
	Also ammonium sulfate or cyanamid	200
Black sandy loam soils	5-10-5	400
	Also top dress with 60 lbs. nitrogen	
Gray sandy loam	10-10-0 or	400
	16-20-0	250
Gray sandy loam in Katy Hockley area	5-10-5 and	400
	Ammonium sulfate or cyanamid	100

Truck Crops	Fertilizer	Pounds Per Acre
Lettuce, Cabbage, Mustard, Collards	5-10-5, 4-12-8	600-800
	Also side dress with 60 lbs. nitrogen	
Carrots, Beets, Turnips	4-12-8, 5-10-5	600-800
Sweet Potatoes	4-8-8, 4-12-8, 5-10-5	400-600
Irish Potatoes	5-10-5, 4-12-8, 5-10-10	400-600
Tomatoes, Peppers, Eggplants	5-10-5, 5-10-10	600-800
	Also side dress with 30 lbs. nitrogen	

Fruits and Truck Crops	Fertilizer	Pounds Per Acre
Cantaloupes) Squash) Cucumbers) Watermelons)	5-10-5, 4-12-4 Side dress with 30 lbs. nitrogen	400-500
Figs	5-10-5	400-600

BLACKLAND PRAIRIE, GRAND PRAIRIE AND EASTERN PART OF EDWARDS PLATEAU

(Including Sandy and Mixed Soils)

Field Crops	Fertilizer	Pounds Per Acre
Alfalfa—Blackland and river bottom	20% superphosphate On acid soils, one to two tons lime additional	300-400
Corn) Grain Sorghum)—Blackland Sweet Sorghum) Sudan)	7-14-0, 10-10-0, 10-20-0 or 16-20-0, 12-15-0 Also side dress with 30 lbs. nitrogen Following fertilized legumes—None	300 200
On sandy and sandy loam soils (mixed land)	5-10-5 Side dress with 30 lbs. nitrogen Following fertilized legumes—None	400
Cotton—Blackland	10-10-0, 7-14-0 or 16-20-0, 12-15-0 Following fertilized legumes—None	300-400 200-250
On sandy and sandy loam soils (mixed land)	5-10-5, 4-12-4 Following fertilized legumes—None	400-500
Legumes, summer and winter Blackland	20% superphosphate	200
On sandy and sandy loam soils (mixed land) On acid soils	4-12-4, 0-14-7 One ton of lime additional	300-400
Flax—Blackland	7-14-0, 10-10-0 or 16-20-0, 12-15-0 Also top dress with 30 lbs. nitrogen	200-300 100-200
On sandy and sandy loam soils (mixed land)	5-10-5, 4-12-4 Also top dress with 30 lbs. nitrogen	200-300
Oats, wheat, and other small grains—Blackland	7-14-0, 10-10-0 or 16-20-0, 12-15-0 Also top dress in spring with 30 lbs. nitrogen Following fertilized legumes—None	300 200
On sandy or sandy loam soils (mixed land)	5-10-5, 4-12-4 Also top dress in spring with 30 lbs. nitrogen Following fertilized legumes—None	300-400

Field Crops	Fertilizer	Pounds Per Acre
Pastures, (permanent)		
Grasses only		
Blackland	Ammonium nitrate (spring and early fall)	100
On sandy or sandy loam soils (mixed land)	5-10-5 Also top dress with 30 lbs. nitrogen as needed	400
Grasses and legumes		
Blackland	20% superphosphate	300-500
On sandy or sandy loam soils (mixed land)	0-14-7	400-600
Pastures, (temporary)		
Small grains	7-14-0, 10-10-0 or	300
Blackland	16-20-0, 12-15-0 Also top dress in spring with 30 lbs. nitrogen Following fertilized legumes—None	200
On sandy or sandy loam soils (mixed land)	5-10-5, 4-12-4 Top dress in spring with 30 lbs. nitrogen	300-400
Small grains and legumes		
Blackland	20% superphosphate	200
On sandy and sandy loam soils (mixed land)	0-14-7	300
Peanuts	4-12-4	200

Truck Crops	Fertilizer	Pounds Per Acre
Carrots—Blackland	7-14-0, 10-10-0 or	400-600
	16-20-0	200-300
On sandy and sandy loam soils (mixed land)	5-10-5, 4-12-4	600-800
Onions—Blackland	7-14-0, 10-10-0 or	400
	16-20-0	200
On sandy and sandy loam soils (mixed land)	5-10-5, 4-12-4	600-800
Tomatoes) Peppers)—Blackland	7-14-0, 10-10-0 or 16-20-0	400-600 200
On sandy and sandy loam soil (mixed land)	5-10-5, 4-12-4	600-800

WEST CROSS TIMBERS AND CENTRAL BASIN

Field Crops	Fertilizer	Pounds Per Acre
Alfalfa (subirrigated)	20% superphosphate, 4-16-0	200-400
On deep sands	0-14-7	300-500

Field Crops	Fertilizer	Pounds Per Acre
Grain Sorghum) Corn) Sweet Sorghum) Sudan)	4-12-4, 5-10-5 Also side dress with 30 lbs. nitrogen Following fertilized legumes—None	200-300
Cotton	4-12-4, 5-10-5, 6-10-4 Following fertilized legumes—None	200-300
Legumes, summer and winter	20% superphosphate	200
On old sandy crop land	0-14-7	300
Oats, wheat and other small grains	7-14-0, 10-10-0 or 16-20-0, 12-15-0 Also top dress in spring with 30 lbs. nitrogen Following fertilized legumes—None	200-300 100-200
Pastures, (permanent)		
Grasses only	10-10-0, 10-20-0, 7-14-0 or 16-20-0, 12-15-0	200-300 100
On old sandy crop land	5-10-5	300-500
Grasses and legumes	20% superphosphate, 4-16-0	200-400
On old sandy crop land	0-14-7	300-500
Pastures, (temporary)		
Small grains for grazing	7-14-0, 10-10-0 or 16-20-0, 12-15-0 Also top dress in early spring with 30 lbs. nitrogen Following fertilized legumes—None	200-300 100-200
On old sandy crop land	5-10-5, 4-12-4 Top dress in spring with 30 lbs. nitrogen	200
Peanuts	4-12-4	150-200
Fruits and Truck Crops	**Fertilizer**	**Pounds Per Acre**
Sweet Potatoes	5-10-5, 5-10-10	400-600
Tomatoes) Peppers)	5-10-5	400-600
Berries	5-10-5	400-500
Cantaloupes) Watermelons)	5-10-5 Also side dress with 30 lbs. nitrogen	400-500
Apples) Pears)		**Pounds Per Tree**
For bearing trees	5-10-5 Also side dress with ½ lb. nitrogen in May or June	5-8
For young non-bearing trees	8-8-8	1-4
Peaches) Plums)		
For bearing trees	5-10-5 Also side dress with ½ lb. nitrogen in May or June	5-8
For young non-bearing trees	8-8-8	1-4

Fruits and Truck Crops	Fertilizer	Pounds Per Tree
Pecans (Upland)		
For bearing trees	5-10-5, 6-10-4	20-30
For young trees	8-8-8	3-10

ROLLING PLAINS

(On Sandy and Sandy Loam Soils)

This is an area of variable rainfall. In some instances fertilizers will not pay.

Field Crops	Fertilizer	Pounds Per Acre
Alfalfa (subirrigated soils)	20% superphosphate, 4-16-0	300-400
Alfalfa (on old sandy crop land)	4-12-8	500
Grain Sorghum)	7-14-0, 10-10-0 or	300
Corn)	16-20-0	150
Sweet Sorghum)	Also side dress with 30 lbs. nitrogen	
Sudan)		
On old sandy crop land	5-10-5, 6-10-4 Also side dress with 30 lbs. nitrogen Following fertilized legumes—None	300
Cotton	10-10-0 or	400-600
	16-20-0, 12-15-0	100
	Following fertilized legumes—None	
On old sandy crop land	10-10-5 Following fertilized legumes—None	400-600
Legumes, summer and winter	20% superphosphate	200-300
On old sandy crop land	0-14-7	300-400
Oats, wheat and other small grains	For grazing and grain	
	Fall application 7-14-0, 10-10-0 or	200
	16-20-0, 12-15-0	100
	Also top dress in early spring with 30 lbs. nitrogen	
	For grain only, top dress in early spring with 30 lbs. nitrogen.	
On old sandy crop land	5-10-5, 4-12-4 Also top dress in spring with 30 lbs. nitrogen	200-300
Peanuts	4-12-4	200
Pastures, (permanent)		
Grasses only	10-10-0, 7-14-0 or	200-300
	16-20-0, 12-15-0	100-200
On old sandy crop land	5-10-5, 6-10-4	300-400
Pastures, (temporary)		
Small grains only	Same as oats, wheat and other small grains	
Small grains and legumes	7-14-0, 10-10-0 or	200-300
	16-20-0, or	100-150
	20% superphosphate	200
On old sandy crop land	5-10-5, 4-12-4	300-400

Fruits and Truck Crops	Fertilizer	Pounds Per Tree
Peaches) Plums)	7-14-0, 10-10-0 or 16-20-0, 12-15-0	3-5 1½-2½
On old sandy crop land	5-10-5	5-7
Apples) Pears)	7-14-0, 10-10-0 or 16-20-0, 12-15-0 Also side dress with ½ lb. nitrogen in May or June	3-5 2½-3
On old sandy crop land	5-10-5	5-7
		Pounds Per Acre
Grapes	7-14-0, 10-10-0 or 16-20-0	400-500 200-250
Vegetables (general)	5-10-5	300-400

HIGH PLAINS

(Irrigated Land)

Field Crops	Fertilizer	Pounds Per Acre
Alfalfa	20% superphosphate, 4-16-0	300-400
Grain Sorghum) Sweet Sorghum) Corn) Sudan)	Ammonium nitrate as side dressing or Ammonium sulfate as side dressing or Cyanamid (10-30 days before planting)	100-200 200-300 200-300
Cotton	7-14-0, 10-10-0 or 16-20-0, 12-15-0	200-300 100-200
Legumes, summer and winter	20% superphosphate, 4-16-0	200-300
Oats, wheat, and other small grains	Ammonium nitrate (Top dress in early spring) or Ammonium sulfate (Top dress in early spring)	100 150-200
Pastures		
Grasses only	Ammonium nitrate or Ammonium sulfate	100 150-200
Grasses and legumes	20% superphospate, 4-16-0	200-400
Establishing pastures on old fields	10-10-0, 7-14-0 or 16-20-0, 12-15-0	300-400 150-200
Sugar Beets) Stock Beets)	7-14-0, 10-10-0 or 16-20-0, 12-15-0 Also side dress with 30 lbs. nitrogen	300-400 150-200

Truck Crops	Fertilizer	Pounds Per Acre
Cabbage) Lettuce) Mustard, etc.)	7-14-0 or 16-20-0, 12-15-0 And side dress with 60 lbs. of nitrogen	400-500 200-250
Carrots) Beets) Turnips)	5-10-5	400-500
Sweet Potatoes	5-10-5, 5-10-10	400-600
Irish Potatoes	6-10-4, 5-10-5 Also side dress with 30 lbs. nitrogen	500-600

Truck Crops	Fertilizer	Pounds Per Acre
Onions	7-14-0, 10-10-0 or	400-600
	16-20-0, 12-15-0	200-300
Tomatoes) Peppers)	5-10-5	600-800
Cantaloupes) Cucumbers) Watermelons) Squash)	5-10-5 Also side dress with 30 lbs. of nitrogen when first blooms appear	400-600
Beans) Peas, English) Peas, Blackeyed, Purplehull) Etc.)	5-10-5 or 20% superphosphate, 4-16-0	400-600 200

RIO GRANDE PLAIN

Field Crops	Fertilizer	Pounds Per Acre
Corn) Grain Sorghum)—Blackland Sweet Sorghum) Sudan)	Side dress with 30 lbs. nitrogen	
On sandy or sandy loam soils	7-14-0, 10-10-0 or 16-20-0, 12-15-0 Also side dress with 30 lbs. nitrogen	100-200 100
Cotton		
On sandy or sandy loam soils	7-14-0, 10-10-0 or 16-20-0, 12-15-0 Following fertilized legumes—None	200-300 100-200
Flax	Same as for Gulf Coast Prairie	
Legumes, summer and winter		
Blackland	20% superphosphate	200
On sandy and sandy loam soils	4-12-4, or 20% superphosphate	200
Pastures, (permanent)		
Blackland		
Grasses only	Ammonium nitrate or Ammonium sulfate	100 150
Grasses and legumes	20% superphosphate	200
Pastures, (permanent)		
On sandy and sandy loam soils		
Grasses only	7-14-0, 10-10-0 or 16-20-0	200-300
Grasses and legumes	20% superphosphate	200
Pastures, (temporary)		
Blackland		
Small grains only	Ammonium nitrate or Ammonium sulfate	100 150
Small grains and legumes	20% superphosphate	200
On sandy or sandy loam soils		
Small grains only	7-14-0, 10-10-0 or 16-20-0, 12-15-0	200-300 100-200
Small grains and legumes	20% superphosphate	200

Fields Crops	Fertilizer	Pounds Per Acre
Peanuts	4-12-4	200

Truck Crops	Fertilizer	Pounds Per Acre
Lettuce)	7-14-0, 10-10-0 or	400-800
Cabbage)	16-20-0	200-400
Spinach	7-14-0	400-600
Carrots)	7-14-0, 10-10-0 or	400-800
Beets)	16-20-0	200-400
Turnips)		
Tomatoes)		
Peppers)	7-14-0	400-800
Eggplants)		
Cantaloupes)		
Squash)		
Cucumbers)	7-14-0, 10-10-0 or	400-600
Watermelons)	16-20-0, 12-15-0	200-300
Grapefruit)	Side dress in spring or early summer with	
Oranges)	70 lbs. of nitrogen	
Lemons)		
Onions	7-14-0, 4-16-0	600

RIO GRANDE, WINTER GARDEN, EL PASO, EDWARDS PLATEAU AND PECOS IRRIGATED AREAS

Field Crops	Fertilizer	Pounds Per Acre
Alfalfa		
Clays	20% superphosphate	300-400
Sandy loams	20% superphosphate	400-500
Corn)	10-10-0 or	300
Grain Sorghum)	16-20-0	200
Sweet Sorghum)	Also side dress with 80-120 lbs. nitrogen	
Sudan)		
Cotton	10-10-0	600
Loam and clay loams	10-10-0	600
Sandy loams	Also side dress with 30 lbs. nitrogen	
	Following fertilized legumes	None
Legumes, summer and winter	20% superphosphate	400-600
Pasture, (permanent)		
Grasses only	7-14-0, 10-10-0 or	300-400
	16-20-0, 12-15-0 or	200
	Ammonium nitrate	100
Grasses and legumes	20% superphosphate or	400
	4-16-0	500
Pasture, (temporary)		
Small grains only	10-10-0, 7-14-0 or	400-600
	16-20-0, 12-15-0 or	200-300
	Ammonium nitrate	200

Field Crops	Fertilizer	Pounds Per Acre
Small grains and legumes	20% superphosphate or	200-300
	10-10-0, 7-14-0, 4-16-0	300-400
Sugar Beets)	7-14-0, 10-10-0 or	300-400
Stock Beets)	16-20-0, 12-15-0	150-300
	Also side dress with 60 lbs. nitrogen	

Fruit and Truck Crops	Fertilizer	Pounds Per Acre
Lettuce)	7-14-0, 10-10-0 or	400-800
Cabbage)	16-20-0, 12-15-0	200-400
	Also side dress with 60 lbs. nitrogen	
Carrots)	7-14-0, 10-10-0 or	300-600
Beets)	16-20-0, 12-15-0	150-300
Turnips)		
Irish Potatoes	7-14-0, 10-10-0 or	400-800
	16-20-0, 12-15-0	200-400
Tomatoes)		
Peppers)	7-14-0, or 10-20-0	300-600
Eggplants)		
Squash)	7-14-0, 10-10-0 or	600-800
Cucumbers)	16-20-0, 12-15-0	300-400
Watermelons)	Also side dress at first bloom with 30-60 lbs. nitrogen	
Cantaloupes)		
Spinach		
On heavy soils	20% superphosphate	400-600
On light soils	7-14-0	400-600
Grapefruit)	10-10-0, 7-14-0 or	600-800
Oranges)	16-20-0, 12-15-0	300-400
Lemons)	Also side dress with 60 lbs. nitrogen in spring or early summer	
Onions	7-14-0 or 4-16-0	600-800
Strawberries	5-10-5 at planting	800
	Also side dress with 5-10-5 at first bloom	300

CROPS FOR THE LOWER RIO GRANDE VALLEY

(Cameron, Hidalgo, Starr, Willacy counties)

Irrigated Lands

The following recommendations for the Lower Valley are expressed in pounds of nutrients per acre. To arrive at a fertilizer to be used on cabbage under these recommendations on old crop land at the minimum rate, the 80-40-0 becomes approximately 530 pounds of 15-10-0 fertilizer. This crop will also be side dressed with 30 lbs. of nitrogen (150 lbs. of sulfate of ammonia or 100 lbs. of ammonium nitrate). Other recommendations will be converted to available fertilizers in the same manner.

Previous Land Treatment

Field Crops	Old Crop Min.	Old Crop Max.	Good Growth Legumes & Phosphate Turned Under Min.	Good Growth Legumes & Phosphate Turned Under Max.	Remarks
Alfalfa	40-80-0	40-120-0	—	—	—
Corn, Grain Sorghum, Sweet Sorghum, Sudan, Johnson Grass	40-40-0	120-80-0	0-40-0	60-80-0	Also side dress with 60 lbs. nitrogen
Cotton	40-80-0	80-80-0	0-0-0	40-80-0	
Legumes, summer and winter	0-40-0	40-120-0	—	—	—
Pastures Grasses only	40-80-0	60-100-0	0-0-0	40-40-0	Side dress with 30-60 lbs. nitrogen per year
Pasture Grasses and legumes	40-80-0	60-100-0	—	—	Side dress with 15-40 lbs. nitrogen per year
Pastures—(temporary) Small grains only	Same as Pastures—Grasses Only				
Pastures—(temporary) Small grains and legumes	40-40-0	80-80-0	0-0-0	40-40-0	Side dress with 30-80 lbs. nitrogen
Truck Crops					
Cantaloupes, Cucumbers, Squash	40-80-0	100-80-0	0-20-0	0-40-0	
Spinach, Escarole and Endive, Dandelion, Collards, Parsley	80-40-0	120-80-0	40-0-0	80-80-0	
Cabbage, Broccoli, Lettuce	80-40-0	120-80-0	40-0-0	80-80-0	Also side dress with 30-60 lbs. nitrogen
Sweet Corn	40-40-0	120-80-0	0-40-0	80-80-0	Also side dress with 40 lbs. nitrogen
Tomatoes, fall	40-80-0	80-80-0	0-40-0	80-80-0	Also side dress with 40 lbs. nitrogen if needed after legume
Tomatoes, spring	40-80-0	120-80-0	0-40-0	80-80-0	Also side dress with 40 lbs. nitrogen

Peppers	40-80-0	120-80-0	0-40-0	40-80-0	Also side dress with 40 lbs. nitrogen if needed after legume
Eggplant	40-40-0	80-80-0	0-40-0	40-80-0	
Potatoes	40-80-0	120-80-0	40-40-0	80-80-0	
Carrots	40-40-0	80-80-0	0-0-0	30-40-0	
Beets	30-0-0	80-0-0	0-0-0	40-40-0	
Onions	40-80-0	80-120-0	0-40-0	40-80-0	
Citrus—per tree					
Young trees 5-8 yrs. old	½-0-0 in 2 applications 1-0-0 in 2-3 applications				
Bearing trees 8-12 yrs. old	1½-0-0	2-0-0 in 2-3 applications			
Bearing trees over 12 yrs. old	2-0-0	3-0-0 in 2-3 applications			
		Dry Land			
Cotton	0-0-0	40-80-0	0-0-0	40-80-0	
Grain Sorghum	0-0-0	40-0-0	0-0-0	40-0-0	
Corn	0-0-0	40-40-0	0-0-0	40-0-0	
Legumes	0-60-0	30-100-0			
Pastures—(temporary) Small grains	40-40-0	80-40-0	0-0-0	40-0-0	
Pastures Grasses	40-80-0	80-80-0			Top dress with 30-60 lbs. nitrogen in April & August before spring and fall rains
Spinach	0-0-0	40-0-0			
Cabbage	40-0-0	80-0-0	0-0-0	40-0-0	Also side dress with 40 lbs. nitrogen if needed
Watermelons	0-0-0	40-80-0	0-0-0	40-0-0	
Cucumbers, Squash	0-0-0	40-80-0	0-0-0	40-0-0	
Onions	0-0-0	40-80-0	0-0-0	40-0-0	

Cooperative Extension Work in Agriculture and Home Economics, The Texas A. & M. College System and United States Department of Agriculture Cooperating. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914.

10M—8-50